

Reaction of acetylacetone with diethylphosphorous acid

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Abstract

The reaction of equimolar amounts of acetylacetone and diethylphosphorous acid at room temperature in the presence of sodium alcoholate gives the diethyl ester of 1-methyl-1-hydroxy-3-ketobutylphosphonic acid. When heated or when treated with water-removing agents the latter cleaves water with the formation of the diethyl ester of 1-methyl-3-keto-1-but-1-yl-phosphonic acid. The reaction of two moles of diethyl-phosphorous acid with one mole of acetylacetone under the same conditions gave 2-oxo-2-ethoxy-3,5-dimethyl-3-hydroxy-5-diethoxyphosphono-1-oxa-2-phospholane. © 1972 Consultants Bureau.

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